CLAIMS

1. A system for estimating a self posture of a leg type moving robot being controlled to follow a determined desired gait, comprising:

a posture angular velocity detecting means for detecting a posture angular velocity of a predetermined part of the robot;

a slippage-free posture angular velocity estimating means for estimating a posture angular velocity of the predetermined part on the basis of motion state amounts of the robot, including at least one of a desired motion of the desired gait, a detected value of a displacement of a joint of the robot, and a desired value of a displacement of the joint, on the assumption that there is no slippage on a contact surface between the robot and a floor;

a drift correction value determining means for determining a drift correction value relative to a detected value of the posture angular velocity detecting means on the basis of at least a detected value of the posture angular velocity detecting means and a posture angular velocity estimated by the slippage-free posture angular velocity estimating means; and

an integrating means for integrating at least the posture angular velocity obtained by correcting a detected value of the posture angular velocity detecting

means by using the drift correction value, thereby to

estimate a posture angle of the predetermined part,

wherein the drift correction value determining means

determines a new drift correction value so as to bring a

5   difference between a posture angular velocity obtained by

correcting a detected value of the posture angular

velocity detecting means by using the drift correction

value and a posture angular velocity estimated by the

slippage-free posture angular velocity estimating means

10   close to zero.

2.   The system for estimating a self posture of the leg

type moving robot according to Claim 1, wherein the drift

correction value determining means comprises a means for

determining whether the rotational slippage is taking

15   place on a contact surface between the robot and a floor,

and a value of the drift correction value is retained if

it is determined that the rotational slippage is taking

place.

3.   A system for estimating a self posture of a leg

20   type moving robot, comprising:

a posture angular velocity detecting means for

detecting a posture angular velocity of a predetermined

part of a leg type moving robot;

a drift correction value determining means for

25   determining, on the basis of at least a detected value of

the posture angular velocity detecting means in a state

wherein a motion of the robot is stopped, a drift

correction value relative to the detected value; and

an integrating means for integrating at least a posture angular velocity obtained by correcting a detected value of the posture angular velocity detecting means by the drift correction value while the robot is in motion so as to estimate a posture angle of the predetermined part.

4. The system for estimating a self posture of a leg type moving robot according to Claim 1, wherein the drift correction value determining means determines the drift correction value on the basis of a component in a yaw direction of a detected value of the posture angular velocity detecting means and a component in the yaw direction of a posture angular velocity estimated by the slippage-free posture angular velocity estimating means.

5. The system for estimating a self posture of a leg type moving robot according to Claim 3, wherein the drift correction value determining means determines the drift correction value on the basis of a component in the yaw direction of a detected value of the posture angular velocity detecting means.

6. The system for estimating a self posture of a leg type moving robot according to Claim 1 or 3, wherein the predetermined part is a body of the robot.